Ludwig Leichhardt's Australian plant collections, 1842-1847

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Summary

Dowe, J.L. (2005). Ludwig Leichhardt's Australian plant collections, 1842-1847. *Austrobaileya* 7(1): 151–163. The contribution made by Ludwig Leichhardt to Australian botany is examined with reference to his collections and their use as types. About 2800 specimens collected by Leichhardt were located, of which at least 78 specimens have been designated as types. Leichhardt's records of species distribution, and manuscript names, are also examined. Forty-nine eponyms, named for Leichhardt, are listed.

Key Words: Australian botany, Ludwig Leichhardt, Overland Expedition, botanical exploration

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Introduction

The plant collections and botanical observations that were made by Australia's colonial explorers contributed to the major taxonomic and systematic treatments produced at the time. Works such as *Flora Australiensis* (Bentham 1863-1878) and *Fragmenta Phytographiae Australiae* (Mueller 1858-1882), were predominantly based on collections by explorers such as Mitchell, Sturt, Gregory, Giles, and Leichhardt, among others, as well as botanists, such as Banks & Solander, Brown, Caley, Dietrich, C. Moore and Cunningham (Maiden 1908; Blake 1955; Hall 1978; Orchard 1999).

Ludwig Leichhardt

The exploration activities of [Friedrich Wilhelm] Ludwig Leichhardt (b. Prussia, 23 Oct.1813, d. central Australia? 1848) have made him one of Australia's most memorable and controversial colonial figures (Jack 1921; Neumayer 1944; Chisholm 1955; Allingham 1977; Desmond 1977; Dalton 1986; Roderick 1988; Barker & Barker 1990; Priessnitz 1991; Levitus 1995; Pearn 2001). His contribution to botany, though well recognised by some (Maiden 1908; Moore 1920; Blake 1955; Hall 1978; Webster 1980; Filson 1992; Orchard 1999; Short 2003), has been oddly disparaged by others who have chosen to emphasise his enigmatic and controversial status (Chisholm 1955; Webb 2003). This paper aims to provide an overview of his collecting activities, the use of his specimens as types, and his contribution to botany in Australia.

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Methods

Citations and other references to collections made by Leichhardt were located in *Flora Australiensis* (Bentham 1863-1878), and *Fragmenta Phytographiae Australiae* (Mueller 1858-1882), as well as other relevant works. The determination and updating of nomenclature were primarily achieved through access to Henderson (2002), APNI (2004), IPNI (2004), and published volumes in the *Flora of Australia* series. Unpublished Queensland Herbarium data, based on Henderson (2002) were designated as the standard in the event of conflicting nomenclature. Literature pertaining to Leichhardt's Overland Expedition was examined and parts relevant to vegetation or botany were appraised and where appropriate were used as references within the text. Searches for Leichhardt's plant specimens were done in B, BM, BRI, E, HO, K, MEL, NSW and P. Herbarium acronyms are according to Holmgren *et al.* (1990).

Results

Arriving in Australia in February 1842 from Germany where he received an education in the natural sciences at Göttingen and Berlin Universities, Leichhardt undertook three major expeditions. The first was the Overland Expedition from the Darling Downs to Port

Essington, Oct.1844-Dec.1845 (Leichhardt 1847b). The second was an unsuccessful attempt to cross Australia from east to west, which commenced in Brisbane in December 1846, but was compelled to return because of illness and the loss of stock after six months (Bunce 1859; Sprod 1989). The third, also an attempt to cross Australia from east to west, commenced in March 1848, and resulted in the disappearance of Leichhardt and his entire party, of which no remains have ever been found (Connell 1980).

Of the specimens collected by Leichhardt during his five years of activity in Australia, the number would have been considerably greater had Leichhardt not been forced to abandon most of his plant and geology specimens during the Overland Expedition because of the drowning of the pack-horses, and other unfortunate incidents. In correspondence to his brother-in-law C. Schmalfuss [24 January 1846], Leichhardt reported that, during the Expedition, he had to "*....burn about 3000 dried plants....*" whilst in correspondence to G. Durando of the Paris herbarium [20 May 1846] he wrote "*.... As my collection increased, I surrounded the different packages with green hide, which when dry, formed a fine box round them, and protected them from hard usage to which they were exposed....the time came when I had to open all my fine green hide boxes, to make a poor choice of the dried plants, and to throw the greatest number of them away unable to carry them any farther, as four of my pack horses drowned, and the means of carrying my collections of plants and geological specimens were consequently destroyed. I fully lost 4-5000 specimens. There are however still some very interesting remnants...*" (Politzer 1944; Aurousseau 1968). Furthermore, additional losses were incurred when a bullock carrying his remaining specimens "*plunged into a deep pond, where he was quietly swimming about and enjoying himself, whilst I was almost crying with vexation at seeing all my plants thoroughly soaked*" (Leichhardt 1847b, p. 469). The majority of Leichhardt's extant specimens were collected in locations that are now southeast Queensland, central and northern New South Wales, and the Port Essington area in the Northern Territory (Webster 1980). Leichhardt published his diary of the Overland Expedition in the form of a journal that was edited by geographer and surveyor P.P. King (Leichhardt 1847b). Hooker (1860, p. cxxi) noted that the journal, at the time, was "*....by far the fullest published detailed account of the tropical vegetation of the interior of Australia that we possess*".

At the time that Leichhardt was engaged in his exploration activities, systematic studies of the Australian flora were relatively rudimentary. Leichhardt's primary references were those of Brown (1810, 1830) and volumes 1-7 of Candolle and Candolle (1823-1839) (Aurousseau 1968). Those works dealt primarily with the plants of the coastal and near-coastal regions, of settled areas and where exploration had previously occurred. The floras of central and northern Australia were yet to be fully appreciated and studied, and it is in this context that Leichhardt framed his scientific attention.

Apart from Leichhardt's specimens subsequently being used in the formulation of taxonomic descriptions, Leichhardt's botanical observations in the journal of the Overland Expedition were often quoted. For example, Bentham (1864, p. 297) noted in his description of *Erythrophleum chlorostachys* (F.Muell.) Baill., as "*also in Leichhardt's collection, and said to be his 'leguminous Iron-bark tree'*" – and Leichhardt's original: "*a leguminous tree, with the dark fissured bark of the Ironbark....*" (Leichhardt, 1847b, p. 242). Mention was made by Bentham (1866, p. 408) with regards to *Gardenia edulis* F.Muell., [= *G. vilhelmii* Domin] of the Gilbert and Lynd Rivers, "*....the "Breadfruit-tree" of Leichhardt....*", though correctly the '*Bread tree*' in the Journal (Leichhardt 1847b, p. 273). Mueller (1866a), in his taxonomic account of *Xylomelum scottianum* (F.Muell.) F.Muell., suggested that this was probably the species noted by Leichhardt in his Journal. The journal entry of May 22, 1845, in the vicinity of Separation Creek was: "*.... a Xylomelum, with smooth and smaller seed-vessels than those of X. pyriforme*" (Leichhardt 1847b, p. 263). Mueller, in naming *Bauhinia leichhardtii* F.Muell., noted that Leichhardt "*referred to it repeatedly in his journal*" (Mueller, 1859, p.51), and with reference to *Loranthus grandibracteus*, Mueller (1860,

p. 150) noted that this species was "*cursorily mentioned in the diary of that lamented traveller*".

It was beyond the scope of this paper to both confirm the existence and whereabouts of all Leichhardt's collections, and to determine the type status of those specimens that have been designated as types. However, herbarium searches yielded about 2800 specimens, which most likely form the bulk of Leichhardt's collections. Of these, at least 78 specimens have been designated as types (**Appendix**).

Leichhardt published no taxonomic work, although he provided accounts that were published within the botanical domain, including an overview of his botanical activities of 1842-1844 (Leichhardt 1845), letters sent to G. Durando of Paris, (Leichhardt 1846), lecture transcripts (Leichhardt 1847a) that contained proposed species names (**Table 1**), and his Journal of an Overland Expedition (Leichhardt 1847b). These publications outlined the extent of Leichhardt's travels and his plant collecting activities. As well, many minor articles were published in newspapers and magazines in Australia, England and Germany (Aurousseau 1968; Hoare 1981).

Heward (1847) provided an account of the botany of Leichhardt's Overland Expedition which drew primarily from Leichhardt's paper published in the *Tasmanian Journal of Natural Science* (Leichhardt 1847a), and it is reasonable to assume, based on Heward making no reference to specimens, that he did not examine any Leichhardt specimens collected during the Overland Expedition. More recently, Jackes (1990) provided an assessment of Leichhardt's botany for the Lynd, Mitchell and Nassau Rivers area, based on Leichhardt's descriptions and names. That account identified species as noted by Leichhardt in his Journal.

With further regard to taxonomy, Leichhardt was cited as author of *Kallstroemia minuta* (Leichh. ex Benth.) Engl. (Engler 1897; Barker 1998), with Engler's transfer of *Tribulopsis minutus* Leichh. ex Benth. to *Kallstroemia*. The type for *Tribulus minutus* Leichh. ex Benth. is "*Queensland (?). Leichhardt's Expedition*" and is extant in K. Engler's work is an illegal combination and he should have cited this taxon as *Tribulus minutus* Leichh. ex Benth., not as a *Tribulopsis*, as *Tribulus* is the genus in which Bentham (1863) formerly established the taxon. The reason that Bentham originally cited Leichhardt as the author is not documented, and it could be surmised that Leichhardt may have provided some notes about the species. Bentham's (1863) author citation of '*Leichh. in Herb. F. Muell.*'

Table 1. Plant names used by Leichhardt (1845, 1847), and which have not been taxonomically accepted and are designated nomina nuda.

Taxon	Reference and citation
Acacia equisetifolia	Journ. Overl. Exped. 356 (1847) "*In a patch of rusty-gum forest we found Acacia equisetifolia....*" Tas. Journ. Nat. Sc. 3: 97 (1847) "*Grevillea ceratophylla, and Acacia equisetifolia, were first met with in latitude 19° 19'.*"
Casuarina villosa	Journ. Overl. Exped. 49 (1847) "*a new species of forest oak, which deserves the name Casuarina villosa, for its bark looks quite villous*"
Grevillea lanceolata	Tas. Journ. Nat. Sc. 3: 97 (1847) "*Grevillea lanceolata, a new species with broad lanceolate leaf, thus named by me, showed itself first at the Suttor, where it was growing on a light sandy soil with Pandanus spiralis.*"
Zamia australis	London J. Bot. 4: 279 (1845) "*The grass tree (Xanthorrhoea) gives a peculiar character to many spots, and Zamia australis is no less striking.*"

suggests this. To my knowledge, the only published reference to *Tribulus* made by Leichhardt is that in which he noted the presence of "*a species of Tribulus*" at Comet Creek (Leichhardt 1847b, p. 87). Barker (1998, p. 32) stated that the type for *T. minutus* was "[Queensland, Leichhardt District], before Canal [pastoral run] and afterwards, *s. dat.*, *L. Leichhardt s.n.* (*syn*: MEL *s.n.*, *p.p.*, excluding lower LHS specimen); without locality, *Leichhardt's Expedition, s.dat., Herb. Mueller* (*syn*: K-Herb. Hooker, type seen photographs in the Eichler manuscripts)". Furthermore, Barker (1998) indicated that there was a specimen in MEL (*Leichhardt 26*, MEL) that was annotated by Leichhardt as "*Tribulus parviflorus mihi*" from Bokkara Flats, 3 January 1847. Barker placed this specimen under *Tribulus micrococcus* Domin.

Leichhardt provided material for an illustration of the fungus *Aseroe rubra* Labill. (Phallaceae) that was published in an account of the fungi in the Hooker collection (Berkeley 1844). Labillardière (1806) had earlier described the fungus. Leichhardt collected the specimen in Sydney in 1842. With regards to examination of specialised collections, Mueller (1866b) provided a summary of the ferns collected by Leichhardt, and Filson (1992) noted that Mueller sent to European researchers a small number of lichen specimens that were collected by Leichhardt.

Conclusion

The contribution made by Leichhardt toward the development of botany in Australia is acknowledged in a number of ways. Mueller, Bentham and others noted over 500 Leichhardt collections in works, about 2800 specimens have been located in herbaria, and at least 78 specimens have been designated as types. In relative terms this is a high proportion of types to numbers collected. Leichhardt's name is commemorated in at least 49 taxa (**Table 2**), of which about half are currently in use. In addition, Leichhardt's journal provided valuable distribution information that was subsequently used by taxonomists in various treatments. Leichhardt's descriptions of the potential pastoral value of areas that he passed through were used in determining patterns of settlement and development of pastoral and mining industries.

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Table 2. Taxa named for Ludwig Leichhardt. Currently accepted taxa honouring Leichhardt indicated in bold

Name honouring Leichhardt	Current Accepted Name for taxon
Acacia decurrens var. *leichhardtii* Benth	*Acacia oshanesii* F.Muell. & Maiden
Acacia leichhardtii Benth.	no change
Acacia mollissima var. *leichhardtii* F.Muell. ex Maiden	*Acacia pubescens* (Vent.) R.Br.
Alsophila leichhardtiana F.Muell.	**Cyathea leichhardtiana** (F.Muell.) Copel.
Amanoa leichhardti Baill.	**Bridelia leichhardtii** Baill. ex Müll.Arg.
Anthocercis leichhardtii F.Muell.	**Duboisia leichhardtii** (F.Muell.) F.Muell.
Aristida leichhardtiana Domin	No change
Bauhinia leichhardtii F.Muell.	*Lysiphyllum cunninghamii* (Benth.) de Wit
Carex inversa R.Br. var. *leichhardtii* Boeck.	*Carex inversa* R.Br.
Chorizema leichhardtii F.Muell.	*Isotropis filicaulis* Benth.
Clematis aristata var. **leichhardtiana** Kuntze	No change
Commersonia leichhardtii Benth.	No change
Datura leichhardtii F.Muell. ex Benth.	No change
Dendrohypnum leichardtii A.Jaeger	**Camptochaete leichhardtii** (A.Jaeger) Broth.
Dicranum leichhardtii Hampe	**Dicranoloma leichhardtii** (Hampe) Watts & Whitel.
Digitaria macractinia subsp. **leichhardtiana** Henrard	No change
Eriostemon leichhardtii F.Muell.	*Halfordia kendack* (Montrouz.) Guillaumin
Eriostemon myoporoides var. *leichhardtii* Benth.	*Philotheca glasshousiensis* (Domin) P.I.Forst.
Eriostemon trachyphyllus var. *leichhardtii* Benth	*Philotheca glasshousiensis* (Domin) P.I.Forst.
Eucalyptus leichhardtii F.M.Bailey	**Corymbia leichhardtii** (F.M.Bailey) K.D.Hill & L.A.S.Johnson
Euphoria leichhardtii Benth.	*Dimocarpus longan* Lour.
Flindersia leichardtii C.D.C.	*Flindersia bennettiana* Benth.
Euphoria leichhardtii var. *hebepetala* Benth.	*Arytera foveolata* F.Muell.
Grevillea leichardtii S.Moore	*Grevillea pungens* R.Br.
Halfordia leichhardtii F.Muell. ex Guillaumin	*Halfordia kendack* (Montrouz.) Guillaumin
Harpullia leichhardtii F.Muell. ex Benth.	No change
Hypnum leichardtii Hampe	**Camptochaete leichhardtii** (Hampe) Broth.
Kunzea opposita var. *leichhardtii* Byrnes	No change
Leichhardtia F.Muell.	*Phyllanthus* L.
Leichardtia R.Br.	*Marsdenia* R.Br.
Leichhardtia T.Shepard	*Callitris* Vent.
Leichardtia australis R.Br.	*Marsdenia australis* (R.Br.) Druce

Table 2 (continued) . Taxa named for Ludwig Leichhardt. Currently accepted taxa honouring Leichhardt indicated in bold

Name honouring Leichhardt	Current Accepted Name for taxon
Lobelia leichhardii E.Wimm.	No change
Livistona leichhardtii F.Muell.	*Livistona humilis* R.Br.
Macropteranthes leichhardtii F.Muell. ex Benth.	No change
Marsdenia leichhardtiana F.Muell.	*Marsdenia australis* (R.Br.) Druce
Morinda leichhardtii F.Muell.	No change
Najas leichhardtii Magnus	No change
Neckera leichhardtii Hampe	*Neckera pennata* Hedw.
Parsonsia leichhardtii F.Muell.	No change
Prostanthera leichhardtii Benth.	*Prostanthera ringens* Benth.
Psoralea leichhardtii F.Muell.	*Indigofera glandulosa* Willd.
Rotala occultiflora var. *leichhardtii* Koehne	*Rotala occultiflora* Koehne var. *occultiflora*
Rubus moorei var. *leichardtianus* Domin	*Rubus moorei* F.Muell. var. *moorei*
Sarcocephalus leichhardtii F.Muell.	*Nauclea orientalis* (L.) L.
Unona leichardtii F.Muell.	**Melodorum leichhardtii** F.Muell.
Urera leichhardtiana Wedd.	*Dendrocnide photinophylla (*Kunth) Chew
Urostigma leichhardtii Miq.	**Ficus platypoda** var. **leichhardtii** (Miq.) R.J.F.Hend.
Vitex leichhardtii F.Muell.	**Gmelina leichhardtii** F.Muell.

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Appendix: Specimens, collected by Ludwig Leichhardt in Australia, that have been designated as types, with updated nomenclature, original literature citations and herbaria where specimens are kept. If specimens have been selected as lectotypes or have become lectoparatypes due to lectotypification this has not been indicated.

Akaniaceae *Cupania lucens* F.Muell., *Fragm.* 3: 44 (1862) = *Akania bidwillii* (Hogg.) Mabb., *Plant Book* 707 (1990)	*Ad sinum Moreton Bay; Leichhardt.*	cited but not located[not at K or BM]
Anacardiaceae *Rhus viticifolia* F.Muell. ex Benth., *Fl Austral.* 1: 489 (1863) = *Rhus tomentosa* L., *Sp.Pl.* 266 (1753)	*Queensland (?) Leichhardt*	K
Apocynaceae *Parsonsia leichhardtii* F.Muell., *Fragm.* 6: 128 (1868)	*Ad sinum Wide Bay; Leichhardt*	MEL
Asteraceae *Cassinia theodori* F.Muell., *Fragm.* 5: 148 (1866)	*In parietibus phonolithicis ad originem fluvii Gwydir; Dr. Ludw. Leichhardt*	K
Asteraceae *Helichrysum diotophyllum* F.Muell., *Fragm.* 5: 150 (1866) = *Ozothamnus diotophyllus* (F.Muell.) Anderb., *Op. Bot.* 104: 89 (1991)	*In Australia orientali subtropica ad flumen Dogwood Creek; Leichhardt et Bunce*	MEL, K
Boraginaceae *Cordia ixiocarpa* F.Muell., *Fragm.* 1: 59 (1858) = *Cordia myxa* var. *ixiophylla* (F.Muell.) Domin, *Biblioth. Bot.* 89(4): 1097 (1930)	*In collibus humilibus ad flumen Gilbert. Leichhardt, Mueller.*	cited but not located[not at K or BM]
Caesalpiniaceae *Cassia concinna* Benth., *Fl. Austral.* 2: 291 (1864) = *Chamaecrista concinna* (Benth.) Pedley, *Fl. Aust.* 12: 143, 196 (1998)	*N.S.Wales. Mount Flinders, Leichhardt*	MEL
Campanulaceae *Lobelia leichhardii* E.Wimm., *Das Pflanzenreich* 107: 584 (1953)	*Australien: Morton Bay, 1845 (Leichhard! - Hb. Paris)*	P
Casuarinaceae *Casuarina equisetifolia* var. *microcarpa* F.Muell., *Fragm.* 6: 17 (1867) = *Casuarina cunninghamiana* Miq. subsp. *cunninghamiana*, *Revisio critica Casuarinarum* 56 (1848)	*ad Glendon (Leichh.).*	MEL
Chenopodiaceae *Atriplex stipitata* Benth., *Fl. Austral.* 5: 168 (1870)	*N.S.Wales. also in Leichhardt's collection*	MEL
Chrysobalanaceae *Parinari nonda* F.Muell. ex Benth., *Fl. Austral.* 2: 426 (1864)	*N.Australia. From the Upper Lind to Van Dieman's river, Gulf of Carpentaria, Leichhardt*	MEL
Combretaceae *Macropteranthes leichhardtii* F.Muell. ex Benth., *Fl. Austral.* 2: 505 (1864)	*Queensland. Ruined Castle Creek Leichhardt.*	MEL, K
Combretaceae *Terminalia platyptera* F.Muell., *Fragm.* 2: 151 (1861)	*In plantiebus terrae Arnhem's Land et circum sinum Carpentariae.*	MEL
Cyathaceae *Alsophila leichhardtiana* F.Muell., *Fragm.* 5: 53 (1865) = *Cyathea leichhardtiana* (F.Muell.) Copel., *Philipp. J. Sc., C* 6: 360 (1911)	*Moreton Bay, Fern-tree Creek, Bunya Mountain, L. Leichhardt.*	MEL

Appendix (continued)

Cyperaceae *Carex inversa* var. *leichardtii* Boeck., *Linnea* 39: 70 (1875) = *Carex inversa* R.Br., *Prodr.* 242 (1810)	*Nova Holland., Paramatto (Leichardt)*	MEL
Cyperaceae *Cladium scleroides* F.Muell., *Fragm.* 9: 12 (1875) =*Exocarya scleroides* (F.Muell.) Benth., *Icones Plantarum* 13: t.1206 (1877)	*In silvis Araucariae Bidwilli prope fluvios Burnett's et Dawson's River, Leichhardt*	MEL
Epacridaceae *Styphelia exolasia* F.Muell., *Fragm.* 6: 34 (1867) = *Leucopogon exolasius* (F.Muell.) Benth., *Fl. Austral.* 4: 217 (1868)	*In vicinia pagi Camden Dre Ludiv. Leichhardt anno 1843 detecta*	K
Epacridaceae *Styphelia pleiosperma* F.Muell., *Fragm.* 6: 41 (1867) = *Leucopogon pleiospermus* (F.Muell.) Benth., *Fl. Austral.* 4: 207 (1868)	*In Australia orientali (loco speciali non indicato), Leichhardt*	K
Euphorbiaceae *Bridelia leichhardtii* Baill. ex Müll.Arg. in Candolle, A.P. de & Candolle, A.L.P.P. de (ed.), *Prodromus* 15(2): 499 (1886)	*In Nova Hollandia ad Moreton Bay (Leichhard! in hb. Mus. Paris).*	P
Euphorbiaceae *Claoxylon australe* Baill. ex Müll.Arg., *Étude Génerale du Groupe des Euphorbiacées*: 493 (1858)	*herb. Mus. Nouvelle-Hollande. Coll. Leichhard, 1845*	P
Euphorbiaceae *Croton stigmatosus* F.Muell., *Fragm.* 4: 140 (1864)	*ad sinum Moreton Bay, Dr. Leichhardt*	G-DC, MEL, P
Euphorbiaceae *Hemecyclia lasiogyna* F.Muell., *Fragm.* 4: 119 (1864) = *Drypetes deplanchei* (Brongn. & Griseb.) Merr., *J. Arnold Arbor.* 32: 199 (1951)	*In locis fontanis ad portum Essingtoni; Leichhardt*	MEL
Euphorbiaceae *Micrantheum ericoides* var. *juniperinum* Grun., *Das Pflanzenreich* 58: 25 (1913)	*Queensland (Leichhardt!)*	MEL
Fabaceae *Bossiaea brownii* Benth., *Fl. Austral.* 2: 163 (1864)	*Queensland. also in Leichhardt's Collection*	MEL
Fabaceae *Chorizema leichhardtii* F.Muell., *Fragm.* 4: 20 (1863) = *Isotropis filicaulis* Benth., *Fl. Austral.* 2: 40 (1864)	*In clivis arenoso- rupestribus ad sinum marinum Wide Bay; Dr. Ludw. Leichhardt*	MEL
Fabaceae *Flemingia parviflora* Benth., *Fl. Austral.* 2: 269 (1864)	*Queensland. Lynedoch valley, Leichhardt*	MEL
Fabaceae *Hovea heterophylla* A.Cunn. ex Hook.f. f. *decipiens* Domin, *Biblioth. Bot.* 89: 729 (1928) = *Hovea linearis* (Sm.) R. Br., *Hortus Kewensis Edn.* 2, 4: 275 (1812)	*sandstone hills towards Brisbane, Leichhardt*	MEL

Appendix (continued)

Fabaceae *Pultenaea paleacea* Willd. var. *obtusata* Benth., *Fl. Austral.* 2: 116 (1864) = *Pultenaea paleacea* Willd. var. *paleacea, Trans. Linn. Soc. London* 9: 246 (1808)	*between Suggerah and Lake Macquoy, Leichhardt*	MEL
Fabaceae *Sophora fraseri* Benth., *Fl. Austral.* 2: 274 (1864)	*Queensland. Murrum-Murrum Creek, Leichhardt*	MEL
Fabaceae *Swainsona brachycarpa* Benth., *Fl. Austral.* 2: 217 (1864)	*Queensland. Condamine river and Darling Downs, Leichhardt*	MEL, NSW
Fabaceae *Swainsona oroboides* F.Muell. ex Benth., *Fl. Austral.* 2: 222 (1864)	*N.S.Wales. head of Gwydir, Leichhardt*	MEL
Fabaceae *Templetonia muelleri* Benth., *Fl. Austral.* 2: 169 (1864) = *Templetonia stenophylla* (F.Muell.) J.M. Black, *Flora of South Australia* 4: 304 (1929)	*Queensland. Wide Bay, Bidwill, Leichhardt*	MEL
Fabaceae *Tephrosia filipes* Benth., *Fl. Austral.* 2: 208 (1864)	*Queensland. Erythrina Creek, Leichhardt*	MEL
Fabaceae *Tephrosia juncea* Benth., *Fl. Austral.* 2: 208 (1864)	*Queensland. also in Leichhardt's collection*	MEL
Fabaceae *Tephrosia purpurea* Pers. var. *rufescens* Benth., *Fl. Austral.* 2: 210 (1864) = *Tephrosia rufula* Pedley, *Austrobaileya* 1: 38 (1977)	*Archer's Hill, Leichhardt*	MEL, NSW
Mimosaceae *Acacia polybotrya* var. *foliolosa* Benth., *Fl. Austral.* 2: 414 (1864) = *Acacia glaucocarpa* Maiden & Blakely, *Proc. Roy. Soc. Queensland* 38: 120 (1927)	*Queensland. limestone hills, Leichhardt*	MEL
Mimosaceae *Acacia undulifolia* var. *humilis* Benth., *Fl. Austral.* 2: 356 (1864) = *Acacia hubbardiana* Pedley, *Contr. Queensland Herb.* 4: 2 (1969)	*also the Brisbane specimens from F.Mueller and Leichhardt*	MEL
Mimosaceae *Acacia leichhardtii* Benth., *Fl. Austral.* 2: 372 (1864)	*Queensland. Expedition range, Leichhardt*	K, NSW
Musci *Neckera leichhardtii* Hampe, *Linnaea* 36: 520 (1870) = *Neckera pennata* Hedw., *Sp. Musc. Frond.* 200 (1801)	*Hab. New South Wales leg. Leichhard*	BM
Myrsinaceae *Myrsine subsessilis* F.Muell., *Fragm.* 4: 81 (1864) = *Rapanea subsessilis* (F.Muell.) Mez., *Das Pflanzenreich* 9: 354 (1902)	*In silvis ad sinum Moreton Bay, Dr. Leichhardt*	NSW
Myrtaceae *Eucalyptus albens* Miq. ex Benth., *Fl. Austral.* 3: 219 (1867)	*N.S.Wales. between Alford's and the Range, "Box," Leichhardt*	MEL
Myrtaceae *Eucalyptus fibrosa* F.Muell., *J. Linn. Soc., Botany* 3: 87 (1859)	*In montibus nemorosis ad flumen Brisbane. Anth. aestate.*	MEL

Appendix (continued)

Myrtaceae *Thryptomene polyandra* F.Muell., *Fragm.* 4: 77 (1864) = *Homalocalyx polyandrus* (F.Muell.) F.Muell. ex Benth., *Fl. Austral.* 3: 56 (1867).	*In quadam parte Australiae haud indicata detexit Dr. Ludw. Leichhardt.*	MEL
Najadaceae *Najas leichhardtii* Magnus, *Beitrage zur Kenntniss der Gattung Najas L.*: 46, 50,52, t. 8, figs 1-8 (1870).	*bei einer von Leichhardt in Australien gesammelten Pflanze*	K
Phallaceae *Aseroe actinobola* Corda, *Icones Fung. cogn* .6: 23 (1854) = *Aseroe rubra* Labill., *Novae Hollandiae Plantarum Specimen* 2: 124 (1806).	*Mr. Leichardt theilte die Zeichnung und Beschreibung des frischen und so merkwürdigen Pilzes folgends mit*	K
Poaceae *Aristida leichhardtiana* Domin, *Regni Veg.* 9: 551 (1911)	*Queensland: Dry-beef Creek, coll. Leichhardt.*	BRI
Poaceae *Aristida vagans* var. *gracillima* Benth., *Fl. Austral.* 7: 563 (1878) = *Aristida gracilipes* (Domin) Henrad, *Med. Rijks-Herb* 54: 209 (1926)	*Cameroons Brush, Leichhardt*	BRI
Poaceae *Festuca latispicea* F.Muell., *Fragm.* 8: 127 (1874) = *Glyceria latispicea* (F.Muell.) Benth., *Fl. Austral.* 7: 658 (1878)	*Ad Gwydir et Myall-Creek, Leichhardt*	MEL
Poaceae *Festuca loliiformis* F.Muell., *Fragm.* 8: 128 (1874) = *Tripogon loliiformis* (F.Muell.) C.E. Hubb., *Bull. Misc. Inform.* 10: 448 (1934)	*Ad Moreton's Bay et Charley's Creek, Leichhardt*	cited but not located[not at K or BM]
Poaceae *Panicum buncei* F.Muell. ex Benth., *Fl. Austral.* 7: 487 (1878)	*Queensland. Bokhara Flats, Leichhardt*	K, BRI
Poaceae *Sporobolus caroli* Mez, *Repert. Spec. Regi. Veg.* 299 (1921)	*Australien, Liverpool-plains (Herb. hort. Sydney)*	MEL
Pontederiaceae *Limnostachys cyanea* F.Muell., *Fragm.* 1: 24 (1858) = *Monochoria cyanea* (F.Muell.) F.Muell., *Fragm.* 8: 44 (1873)	*In terra Arnhem's Land. Leichhardt*	K, MEL
Proteaceae *Grevillea leichardtii* S.Moore, *J. Linn. Soc. Bot.* 45: 211 (1920) = *Grevillea pungens* R.Br., *Trans. Linn. Soc. London* 10: 175 (1810)	*N. Australia, "Sandy scrubland west side of gulf" [Carpentaria]; Leichardt*	BM, K, MEL
Proteaceae *Grevillea leiophylla* F.Muell. ex Benth., *Fl. Austral.* 5: 471 (1870).	*Queensland. Glasshouse ranges, Moreton Bay, F.Mueller, and probably the same neighbourhood, Leichhardt*	MEL, NSW
Proteaceae *Grevillea rubicunda* S.Moore, *J. Linn. Soc. Bot.* 45: 210 (1920)	*N. Australia, "Westward of the Gulf [Carpentaria], table-land of the South Alligator"; Leichardt*	BM

Appendix (continued)

Proteaceae *Grevillea singuliflora* F.Muell., *Fragm.* 6: 92 (1867)	*Ad rivum Dogwood-Creek Dogwood Creek, Leichhardt*	BM, MEL
Proteaceae *Lomatia silaifolia* var. *induta* F.Muell. ex Benth., *Fl. Austral.* 5: 537 (1870) = *Lomatia silaifolia* var. *silaifolia* (Sm.) R.Br., *Trans. Linn. Soc. London* 10: 199 (1810)	*Brisbane river, Moreton Bay, Leichhardt, F. Mueller*	BM, K
Ranunculaceae *Clematis aristata* var. *leichhardtiana* Kuntze, *Verh. Bot. Vereins Prov. Brandenburg* 26: 156 (1885)	*Australia (!1842 Leichhardt, mus. bot. berol.); Norfolk Island; Lord Howe's Island; Nova Caledonia (!Gillivray)*	cited but not located[not at K or BM]
Rhamnaceae *Emmenosperma alphitonioides* F.Muell., *Fragm.* 3: 63 (1862)	*ad amnem Piri Creek; Dr Ludw. Leichhardt*	cited but not located[not at K or BM]
RosaceaeRubus moorei F.Muell. var. leichhardtianus Domin, Regni. Veg. 1133 (1913) = Rubus moorei F.Muell. var. moorei	*New South Wales: From the Creek Brush to Archers Station, leg. Leichhardt*	MEL
RubiaceaeAsperula geminifolia F.Muell., Fragm. 5: 147 (1899)	*In pratis ripariis inter flumina Dawson's River et Brisbane's River; Leichhardt, F.M.; nec non prope urbem Newcastle, Leichhardt*	cited but not located[not at K or BM]
RutaceaeEriostemon leichardtii F.Muell. Fragm. 5: 5 (1866) = Halfordia kendack (Montrouz.) Guillaumin, Notulae Systematicae (Paris) 98 (1911)	*Secus rivos silvaticos in vicinia sinus marini Moreton Bay. Dr. Ludw. Leichhardt*	MEL
Rutaceae *Eriostemon trachyphyllus* var. *leichhardtii* Benth., *Fl. Austral.* 1: 333 (1863) =*Philotheca glasshousiensis* (Domin.) P.I.Forst., *Austrobaileya* 7: 178 (2005)	*"From Brroa" (N.S.Wales?) Leichhardt*	MEL
Rutaceae *Flindersia leichardtii* C.DC., *Monographic Phanerogamarum* 1: 731 (1878) = *Flindersia bennettiana* Benth., *Fl. Austral.* 1: 389 (1863)	*In Moreton Bay (Leichardt in herb. Mus. Par.)*	P
Santalaceae *Choretrum candollei* F.Muell. ex Benth., *Fl. Austral.* 6: 219 (1873)	*N.S.Wales. Liverpool plains, Leichhardt*	MEL
Sapindaceae *Euphoria leichhardtii* Benth. var. *hebepetala* Benth., *Fl. Austral.* 1: 468 (1863) = *Arytera foveolata* F.Muell., *Trans. & Proc. Philos. Instit. Vic.* 3: 24 (1859)	*"Nurrum Nurrum", Leichhardt (Herb. F.Muell.)*	MEL
Sapindaceae *Euphoria leichhardtii* Benth. *Fl. Austral.* 1: 468 (1863) = *Dimocarpus longan* Lour., *Fl. Cochin.* 233 (1790)	*Queensland (?), Leichhardt (Herb. F. Muell.).*	MEL
Sapindaceae *Harpullia leichhardtii* F.Muell. ex Benth., *Fl. Austral.* 1: 470 (1863)	*N.Australia. Port Essington, Leichhardt*	MEL

Appendix (continued)

Simaroubaceae *Ailanthus punctata* F.Muell., *Fragm.* 3:42 (1863] = *Pentaceras australis* (F.Muell.) Benth., [Rutaceae] *Fl. Austral.* 1:365 (1863)	*in silvis Australiae orientalis subtropicae; e.g. MacConnell's Brush, L. Leichhardt*	cited but not located[not at K or BM]
Solanaceae *Anthocercis leichhardtii* F.Muell., *Fragm.* 6: 142 (1868) = *Duboisia leichhardtii* (F.Muell.) F.Muell., *Syst. Census Austral.* Pl. 97 (1883)	*In Australia orientali extratropica; Leichhardt*	K, MEL
Sterculiaceae *Commersonia leichhardtii* Benth., *Fl. Austral.* 1:242 (1863)	*Queensland. Head of Boyd river, Leichhardt, in Herb. F. Muell.*	MEL
Stereaceae *Thelephora leichhardtiana* Lev., *Ann. Sci. Nat.* ser.3, 5: 148 (1846) = *Stereum ostrea* Blume & Nees, *Epicr. Syst. Mycol.* 547 (1838)	*Queensland.*	K
Urticaceae *Hyrtanandra lythroides* F.Muell., *Fragm.* 5: 194 (1866) = *Pouzolzia hirta* (Blume) Hassk., *Cat. Hort. Bogor* 800 (1844)	*Ad flumen Lynd's River ejus originem versus, nec non ad fluvium South Alligator-River in terra tabulari; Dr. Leichhardt.*	cited but not located[not at K or BM]
Urticaceae *Elatostema reticulatum* Wedd., *Ann. Sci. Nat. Bot.* ser. 4, 1:188 (1854)	*Nov. Holland. (Leichhard, pl. exs., n.?).*	NSW
Urticaceae *Urera leichardiana* Wedd., *Ann. Sci. Nat.* ser 4, 1:178 (1854) = *Dendrocnide photinophylla* (Kunth) Chew, *Gard. Bull. Singapore* 21:205 (1965)	*Nov. Holland. (Leichard, pl. exs. n. 26).*	P
Urticaceae *Urera excelsa* Wedd., *Ann. Sci. Nat.* ser 4, 1:178 (1854) = *Dendrocnide excelsa* (Wedd.) Chew, *Gard. Bull. Singapore* 21:205 (1965)	*Nova Hollandia (Leichhard, pl. exs. n. 17).*	P
Verbenaceae *Vitex leichhardtii* F.Muell., *Fragm.* 3:58 (1862) = *Gmelina leichhardtii* (F.Muell.) Benth., *Fl. Austral.* 5: 66 (1870).	*In silvis ad amnem Myall Creek Australiae orientalis subtropicae; Dr. Ludwig Leichhardt.*	MEL
Zygophyllaceae *Tribulus minutus* Leichh. ex Benth., *Fl. Austral.* 1:291 (1863)	*Queensland (?), Leichhardt's Expedition.*	K, MEL, NSW